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TITLE: Absorption of solar radiation by water vapor as observed at various altitudes

PERIODICAL: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 6, 1962, 73 - 79

TEXT: It is reported that the calibration curves for the Earth bands of water vapor and oxygen in the solar spectrum differ considerably from the curves of F. E. Fowle (Smithson. Ann., 3, 171, 1913; 3, 182, 1913). These calibration curves were recorded by the authors at the Kuchinskaya astrophysical observatory (Kuchin Astrophysical Observatory) and in the Vysokogornaya stantsiya GAIsh (High Mountain Station GAIsh) at Alma Ata during the International Geophysical Year. The difference can hardly be due to inaccurate determination of the line in the continuous spectrum. The zero line was found precisely both by Fowle and by the present authors. Also the light scattered in the spectrograph was correctly considered in both cases. In the authors' opinion, their calibration curve correctly

Card 1/2

Absorption of solar ...

S/188/62/000/006/014/016
B125/B104

represents the features of the absorption of radiation by water vapor. Fowle's curve, which was plotted under laboratory conditions at 760 mm Hg, is suitable only for observations at low altitudes (plane) and not for those at altitudes exceeding 2 - 3 km. There are 5 figures.

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Card 2/2